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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/873,127	06/01/2001	Brian E. Lemoff	AT10004209-1	3243

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EXAMINER

PAK, SUNG H

ART UNIT

PAPER NUMBER

2874

DATE MAILED: 02/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n No.

09/873,127

Applicant(s)

LEMOFF ET AL.

Examiner

Sung H. Pak

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the corresp ndence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

DETAILED ACTION

Information Disclosure Statement

No information disclosure statement has been filed for this application.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6, 8-9, 11-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Kobayashi et al (JP 06-258584).

Kobayashi et al disclose a fiber optic matrix switch with all the limitations set forth in the claims including: N input and M output optical fibers (Fig. 1); a first plurality of stages each supporting an end portion of a corresponding one of the N optical fibers in ferrules; a second plurality of stages each supporting an end portion of a corresponding one of the M optical fibers in ferrules (Fig. 1); means for translating the stages along a plurality of overlapping paths to align a facet of a selected one of the N input optical fibers with a facet of a selected one of the M output optical fibers (abstract); wherein fibers are translated orthogonal X and Y axis (Fig. 1); wherein N=M (Fig. 4); means for moving the end portions of at least some of the optical fibers along a plurality of Z axes perpendicular to the X and Y axes to mate and un-mate the facets of the input and output fibers (See "17" in Fig. 1); a connecting plate having plurality of holes and

connecting sleeves (Fig. 1 and abstract); means for controlling and fine-tuning the movement of the actuator for positioning the fiber ferrule (paragraph 0026-0029).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 7, 10, 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al (JP 06-258584).

Regarding claims 7 and 25, Kobayashi et al discloses a fiber optic matrix switch as discussed above, wherein the fiber and the ferrule are moved toward the sleeve of the connecting plate as indicated by the arrow in Fig. 1. However, Kobayashi et al does

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not explicitly teach the use of spring means for biasing the ferrules to their fully inserted positions. None the less, the use of spring bias in fiber optic connection arrangement is well known in the art. Such an arrangement provides a well known advantage of forcing the fiber connectors together which minimizes misalignment of the connectors and consequent optical loss. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Kobayashi et al device to have spring bias means.

Regarding claim 10, Kobayashi et al discloses a fiber optic matrix switch as discussed above, except it does not explicitly teach the use of collimating lens in transmitting the optical beams. However, such collimating lenses are well known and commonly used in the art. Collimating lenses provide a well-known advantage of precise optical beam alignment and accurate routing in free space optical switching. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Kobayashi et al device to use collimating lenses.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Saito et al (US 5,337,378), Takahashi (US 6,307,982 B1), Saito et al (5,436,987), Tamaki et al (JP 02-099908), Singh (US 2002/0076134 A1), Takahashi (6,335,993 B1), Bavington et al (US 6,296,397 B1), Yang et al (US 5,699,463), Mock (US 5,664,034) disclose movable optical coupler pertinent to applicant's invention.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sung H. Pak whose telephone number is (703) 308-4880. The examiner can normally be reached on Monday - Thursday : 6:30am-5:00pm.


The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7724 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



Sung H. Pak
Examiner
Art Unit 2874

sp
January 29, 2003



Rodney Bovernick
Supervisory Patent Examiner
Technology Center 2800